

WE CLAIM:

1. A method for detecting an assumed octet slip in an inband signalling block in pulse code modulation, the method comprising:
choosing a searching direction;
searching a first error bit k1 starting from a chosen end of a searching block;
counting a number of bit errors starting from said k1 bit in a slipped block; and
detecting octet slip by analyzing the error bits.
2. The method according to claim 1, wherein when the chosen direction is from a first bit to a last bit, the searching block is a signalling block and the slipped block is adjacent block.
3. The method according to claim 1, wherein when the chosen direction is from a last bit to a first bit, the searching block is an adjacent block and the slipped block is a signalling block.
4. The method according to claim 3, further comprising verifying a correctness of the signalling block before searching.
5. The method according to claim 2, wherein searching and counting bit errors is performed by comparing the signalling block and the adjacent block to a sample block.
6. The method according to claim 2, wherein the octet slip is detected starting from or after the bit k1 if the number of the bit errors in the slipped block is more than one.
7. The method according to claim 2, wherein the octet slip is detected before the bit k1 if the number of error bits starting from the bit k1 is zero or one.
8. The method according to claim 6, further comprising searching a second error bit k2 of the searching block starting from a bit after the first error bit k1.

9. The method according to the claim 8, further comprising detecting if the bits of the slipped block starting from the second error bit k2 are correct.

10. The method according to the claim 9, further comprising detecting that the octet slip between the error bits k1 and k2 and the number of bit errors is one if the bits in the slipped block starting from the second error bit k2 are correct.

11. The method according to the claim 9, further comprising determining that the octet slip cannot be detected if the number of bit errors is more than one.

12. A device for detecting an assumed octet slip in an inband signalling block in pulse code modulation, which device is connected to in path equipment, the system comprising a slip detector, said slip detector comprising:

- means for choosing a searching direction;
- a searcher arranged to search a first error bit k1 starting from a chosen end of a searching block;
- a counter arranged to count a number of bit errors starting from said k1 bit in a slipped block; and
- a detector arranged to detect the octet slip by analyzing error bits.

13. The device according to claim 12, wherein if the chosen direction is from a first bit to a last bit the device is arranged to set the searching block to correspond to a signalling block and the slipped block to correspond to an adjacent block.

14. The device according to claim 12, wherein if the chosen direction is from a last bit to a first bit the device is arranged to set the searching block to correspond to an adjacent block and the slipped block to correspond to a signalling block.

15. The device according to claim 14, wherein the device is arranged to verify a correctness of the signalling block before searching.

16. The device according to claim 13, wherein the searcher is arranged to search bit error by comparing the signalling block and the adjacent block to a sample block.

17. The device according to claim 13, wherein the detector is arranged to detect the octet slip starting from or after the bit k1, if the number of bit errors in the slipped block is more than one.

18. The device according to claim 13, wherein the detector is arranged to detect the octet slip before the bit k1 if the number of bit errors starting from the bit k1 is zero or one.

19. The device according to claim 17, wherein searcher is arranged to search a second error bit k2 of the searching block starting from a bit after the first error bit k1.

20. The device according to the claim 19, wherein the detector is arranged to detect if bits of the slipped block starting from the second error bit k2 are correct.

21. The device according to the claim 20, wherein the detector is arranged to detect that the octet slip between the error bits k1 and k2 and the error count is one if the bits starting from the error bit k2 are correct.

22. The device according to the claim 21, wherein the detector is arranged to determine that the octet slip cannot be detected if the number is more than one.

23. A system for detecting an assumed octet slip in an inband signalling block in pulse code modulation, which system comprises:
a sender terminal;
a receiver terminal;
an in path equipment; and
a slip detector that is arranged to detect assumed octet slip.

24. The system according to claim 23, wherein the slip detector further comprises:
means for choosing the searching direction;

a searcher arranged to search a first error bit k1 starting from a chosen end of a searching block;
a counter arranged to count a number of bit errors starting from said k1 bit in a slipped block; and
a detector arranged to detect the octet slip by analyzing error bits.

25. The system according to claim 24, wherein if the chosen direction is from a first bit to the last bit the device is arranged to set the searching block to correspond to a signalling block and the slipped block to correspond to an adjacent block.

26. The system according to claim 24, wherein if the chosen direction is from a last bit to a first bit the device is arranged to set the searching block to correspond to an adjacent block and the slipped block to correspond to a signalling block.

27. The system according to claim 26, wherein the device is arranged to verify a correctness of the signalling block before searching.

28. The system according to claim 25, wherein the searcher is arranged to search bit error by comparing the signalling block and the adjacent block to a sample block.

29. The system according to claim 25, wherein the detector is arranged to detect the octet slip starting from or after the bit k1, if the number of the bit errors in the slipped block is more than one.

30. The system according to claim 25, wherein the detector is arranged to detect the octet slip before the bit k1 if the number of bit errors starting from the bit k1 is zero or one.

31. The system according to claim 29, wherein the searcher is arranged to search a second error bit k2 of the searching block starting from a bit after the first error bit k1.

32. The system according to claim 31, wherein the detector is arranged to detect if the bits of the slipped block starting from the second error bit k2 are correct.

33. The system according to claim 32, wherein the detector is arranged to detect that the octet slip between the error bits k1 and k2 and the number of bit errors is one if the bits starting from the error bit k2 are correct.

34. The system according to claim 33, wherein the detector is arranged to determine that the octet slip cannot be detected if the number is more than one.

35. The system according to claim 24 wherein the slip detector is arranged into the path equipment.

36. The system according to the claim 24, wherein the slip detector is arranged into the receiver terminal.